

IN THE CLAIMS:

Please amend the claims as follows:

Claim 1 (Currently Amended): An X-ray tube for emitting X-rays through a transmission window, comprising:

a closed vessel ~~having~~ including an opening for defining said transmission window, said closed vessel having a glass faceplate which contains an alkaline ion and which has an opening corresponding to said transmission window;

an electron source, arranged in said closed vessel, for emitting electrons;

an X-ray target, arranged in ~~the~~ said closed vessel, receiving the electrons emitted from said electron source and generating the X-rays; and

a silicon foil constituting said transmission window and having a thickness of 3 μm or more but 30 μm or less, said silicon foil being directly affixed on said glass faceplate by an anode bonding, while covering said opening of said glass faceplate.

Claims 2-3 (Canceled).

Claim 4 (Currently Amended): An X-ray tube according to claim ~~[[3]]~~ 11, wherein said glass faceplate has a minimum outer diameter larger than a maximum outer diameter of said silicon foil.

Claim 5 (Currently Amended): An X-ray tube according to claim ~~[[3]]~~ 11, wherein said glass faceplate has a sectional shape where a thickness of a peripheral part thereof is thinner than that of an inner side part thereof defining said transmission window.

Claim 6 (Currently Amended): An X-ray tube according to claim ~~[[1]]~~ 11, wherein said silicon foil has a thickness of 3 μm or more but 10 μm or less.

Claim 7 (Currently Amended): An X-ray tube according to claim ~~[[1]]~~ 11, wherein said X-ray target is deposited on ~~the~~ said inner surface of said silicon foil ~~of said side facing inside said closed vessel.~~

Claim 8 (Currently Amended): An X-ray tube according to claim ~~[[1]]~~ 11, wherein said opening of said closed vessel has a mesh structure so that said transmission window is divided into a plurality of sections.

Claim 9 (Currently Amended): An X-ray tube according to claim ~~[[1]]~~ 11, wherein said opening of said closed vessel is composed by a plurality of through-holes, each corresponding to said transmission window.

Claim 10 (New): An X-ray tube according to claim 1, wherein a part of said silicon foil, which directly faces inside said closed vessel through said opening of said closed vessel, is convexed toward the inside of said closed vessel.

Claim 11 (New): An X-ray tube for emitting X-rays through a transmission window, comprising:

a closed vessel including an opening for defining said transmission window, said closed vessel having a glass faceplate which has an opening corresponding to said transmission window;

an electron source, arranged in said closed vessel, for emitting electrons;

an X-ray target, arranged in said closed vessel, receiving the electrons emitted from said electron source and generating the X-rays; and

a silicon foil constituting said transmission window and having a thickness of 3 μm or more but 30 μm or less, said silicon foil being directly affixed on an outer surface of said glass faceplate, while covering said opening of said glass faceplate; and

a protection electrode deposited on an inner surface of said glass faceplate which opposes said outer surface of said glass faceplate and directly faces inside said closed vessel.

Claim 12 (New): An X-ray tube for emitting X-rays through a transmission window, comprising:

a closed vessel including an opening for defining said transmission window and having:

a glass main body which has an opening edge;

a metal flange attached on said opening edge of said main body and

having an opening corresponding to or larger than said transmission window; and

a glass faceplate having an opening corresponding to said transmission window, at least a part of said glass faceplate being attached to said metal flange

while the center of said opening of said glass faceplate corresponds to the center of said opening of said depression;

an electron source, arranged in said closed vessel, for emitting electrons;

an X-ray target, arranged in said closed vessel, receiving the electrons emitted from said electron source and generating the X-rays; and

a silicon foil constituting said transmission window and having a thickness of 3 μm or more but 30 μm or less, said silicon foil being directly affixed on an outer surface of said metal flange, while covering said opening of said glass faceplate.

Claim 13 (New): An X-ray tube according to claim 12, wherein said glass faceplate contains an alkaline ion, and said silicon foil is directly affixed on said outer surface of said glass faceplate by an anodic bonding.

Claim 14 (New): An X-ray tube according to claim 13, wherein a minimum diameter of said opening of said glass faceplate is smaller than that of said opening of said metal flange, and wherein said X-ray tube further comprises a protection electrode deposited on an inner surface of said glass faceplate which opposes said outer surface of said silicon foil and directly faces inside said closed vessel.

Claim 15 (New): An X-ray tube according to claim 13, wherein said glass faceplate has a minimum outer diameter larger than a maximum outer diameter of said silicon foil.

Claim 16 (New): An X-ray tube according to claim 13, wherein said glass faceplate has a sectional shape where a thickness of a peripheral part thereof is thinner than that of an inner side part thereof defining said transmission window.

Claim 17 (New): An X-ray tube according to claim 12, wherein said silicon foil has a thickness of 3 μm or more but 10 μm or less.

Claim 18 (New): An X-ray tube according to claim 12, wherein said X-ray target is deposited on an inner surface of said silicon foil which opposes said outer surface of said silicon foil and directly faces inside said closed vessel.

Claim 19 (New): An X-ray tube according to claim 12, wherein said opening of said closed vessel has a mesh structure so that said transmission window is divided into a plurality of sections.

Claim 20 (New): An X-ray tube according to claim 12, wherein said opening of said closed vessel is composed by a plurality of through-holes, each corresponding to said transmission window.